The Rise of the Knowledge Broker

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Abstract
Knowledge brokers are people or organizations that move knowledge around and create connections between researchers and their various audiences. This commentary reviews some of the literature on knowledge brokering and lays out some thoughts on how to analyze and theorize this practice. Discussing the invisibility and interstitiality of knowledge brokers, the author argues that social scientists need to analyze more thoroughly their practices, the brokering devices they use, and the benefits and drawbacks of their double peripherality. The author also argues that knowledge brokers do not only move knowledge, but they also produce a new kind of knowledge: brokered knowledge.

Keywords
knowledge brokering, translation, double peripherality, brokered knowledge

The Rise of the Knowledge Broker

Within our so-called knowledge society, there is nowadays an increasing number of - and need for - knowledge brokers, that is, people whose job it is to move knowledge around and create connections between researchers and their various audiences.(1) However, the ways in which scientific knowledge is transported and translated across the boundaries of different worlds has

not been much explored. “We need to understand not only how knowledge is made in specific places but also how transactions occur between places,” Shapin (1998, pp. 6-7) argues. In light of Shapin’s suggestion, in this commentary I review some of the literature on knowledge brokering and lay out some thoughts on how to analyze and theorize this practice.

So what, exactly, are we to understand by the notion of knowledge broker? Broadly speaking, knowledge brokers can be understood as persons or organizations that facilitate the creation, sharing, and use of knowledge (Sverrisson, 2001). Their task is to establish and maintain links between researchers and their audience via the appropriate translation of research findings (Lomas, 1997). Able to link know-how, know-why, and know-who, the knowledge broker thus works in the public domain as much as in the private domain (Blondel 2006). Some argue that knowledge brokering is a fundamental characteristic of postmodern professionals (Kakihara & Sorensen, 2002). Knowledge brokering is on the rise in a variety of areas: the “boundary spanning knowledge broker” is a new role for engineers (Johri, 2008); academies of science increasingly adopt the role of a broker (see Kissling-Naf, 2009); among IT professionals there is a proliferation in brokering activities (Pawlowski et al., 2000), and even whole countries are said to act as knowledge brokers (Oldham & McLean, 1997). Wherever we look, knowledge brokering seems to be growing in importance (Bielak, Campbell, Pope, Schaefer, & Shaxson, 2008).(2)

However, can knowledge brokering take place anywhere and everywhere? Knowledge brokering tends to happen in particular locations—in spaces that *privilege* the brokering of knowledge across boundaries, of which the following are a few examples. *Science shops* are small entities that carry out scientific research on behalf of citizens and local communities, thus responding to the general public’s needs for expertise and knowledge. They act, in particular, as intermediaries between academia and various societal groups (Wachelder, 2003, p. 252). Within some universities a new organizational form—the *university technology transfer office*—and a new occupation—the professional university technology transfer manager—have emerged over the past couple of decades. They constitute a professional group and space dedicated to brokering work at the margins of the university (Vogel & Kaghan, 2001; see also Jacobson, Butterill, & Goering, 2004).

Let us also mention the increasing importance and influence of *science journalists and science writers*—especially to allow for shortcuts, much needed because the volume of scientific knowledge has dramatically increased so that even scientists can’t be experts in their own vocation anymore (Clemens, 1986, p. 445). (Even the work of interdisciplinary academic journals could be seen as a form of knowledge brokering

across disciplines.) It is of interest to further explore brokering spaces like these because they have developed at the intersection of worlds that have become increasingly intertwined and because the traffic of knowledge between these worlds has become increasingly professionalized, formalized, and institutionalized. A key sector, however, is the health care sector where there is a growing and pressing need to bridge the gap between research results and the use of these results for patients. (See especially the practical and theoretical work done by the Canadian Health Services Research Foundation, 2003, which is an often-quoted example.)

Let me, therefore, briefly mention 2 examples from the health care domain. For instance, a research project on knowledge brokering at a UK university notes as follows:

> The gap between what is known and what is done contributes to poor health outcomes and ultimately results in wasted time and money (...) Different ways of bridging this gap have been proposed, but one of the most popular involves employing individuals to act as "knowledge brokers." Their job is to create linkages and facilitate the transfer of knowledge between researchers and practitioners. (Leeds Institute of Health Sciences, 2009; see also Ward, House, & Hamer, 2009)

Another example comes from a group of doctors working in a hospital in France. Having identified the gap between available therapeutic research results and physicians' prescriptions as well as the difficulties to transfer research into practice (be it because of a lack of trust, a lack of time and resources, or the sheer amount of available data), they propose to bridge the gap between knowledge and the use thereof by

> comprehensively collecting and summarizing clinical trial reports, scoring and ranking these according to their level of evidence, exploring and synthesizing the data using meta-analysis, summarizing these results, representing them in an easily understandable form, and transmitting the overview findings to prescribers at the time they need them. (Boissel, Amsallem, Cucherat, Nony, & Haugh, 2004, p. 609)

As we can see from this latter example, brokering involves a range of different practices: the identification and localization of knowledge, the redistribution and dissemination of knowledge, and the rescaling and transformation of this knowledge. Brokering knowledge thus means far more than simply *moving* knowledge—it also means transforming knowledge.

Having said that, despite these general traits, knowledge brokering is likely to look very different in the various brokering spaces mentioned above, not least because the needs and expectations of the knowledge users might differ substantially (be it local communities in search of specific knowledge, corporations wanting profitability, doctors and patients calling for effective treatments, policy makers needing to make decisions, etc.).

Theorizing Brokering

How are we to theorize the practice of brokering? Wenger (1998, p. 109) has offered a useful definition: "brokering (...) involves processes of translation, coordination, and alignment between perspectives. (...) It also requires the ability to link practices by facilitating transactions between them." Knowledge brokers are said to act in three different manners: as knowledge managers, linkage agents (between producers and users of knowledge), or capacity builders (through enhancing access to knowledge; Oldham & McLean, 1997). In doing so, they are involved in a broad range of activities: articulation work, communication work, identification work, mediation work, educational work, and so on. All these activities require a variety of tools, such as organizing seminars or meetings (see Sverrisson, 2001, p. 317), developing databases, producing plain-language booklets (Kramer & Wells, 2005, p. 431) and so on and so forth. Above all, brokers have to create a common language, being a sort of "linguistic creator": "The task is none other than that of constructing a language in which the parties can place themselves and engage with each other in mutual understanding" (Barnett, 2003, p. xvii, emphasis removed). The typical brokering devices used still need to be identified and characterized in more detail.

A helpful concept to theorize knowledge brokering is the notion of *translation*. Callon (1986) defines translation as a process involving several moments: defining an actor; testing, stabilizing, and specifying the roles of this actor; and, finally, rendering it mobile. In Law's (2002, p. 99) words, "To translate is to connect, to displace, to move, to shift from one place, one modality, one form, to another while retaining something. Only something. Not everything. While therefore losing something. Betraying whatever is not carried over." Brokering can thus be conceived as being a form of translation with a specific emphasis on the following features: a need for at least two simultaneous translations and a reification and increased visibility of the role of "translators," that is, brokers.

Let us also mention Shinn (2002, p. 611) who has coined the term *transversality*—a practice that "crosses cognitive, economic and societal boundaries." In particular, he

identified an informal and unofficial group of people, “research technologists,” who operate at the interface between institutions. He writes, “They stand ‘in-between’ orthodox professions and bodies, and are thereby interstitial. They both sustain instituted differentiations and divisions of labour and violate them” (Shinn, 2002, p. 612).(3)

Certainly, it is common to argue that knowledge brokers are somehow in between worlds (Bielak et al., 2008; Lomas, 2007; Satterfield, Burd, Valdez, Hosey, & Shield, 2002). Yet I would argue that a more fruitful way to think about those in between two or more worlds is to think in terms of peripheries. In the community of practice literature, the term *periphery of practice* is developed (Wenger, 1998, p. 117), and it has been argued that there are “multiple, varied, more- or less-engaged and inclusive ways of being located in the fields of participation” (Lave & Wenger, 1991, pp. 35-36). What, then, about those people who are peripheral to two worlds? What about those people who are not on an inbound trajectory into either one or the other world but who perpetually are on a peripheral trajectory or a boundary trajectory (Wenger, 1998)? Even more so, some have argued that knowledge brokers might be well placed to resist the “dogmas” of the domains they are eventually meant to bring together (Hargadon, 2002, p. 77). How do knowledge brokers talk about, experience, and gain capital from their “double peripherality,” that is, from the fact that they are partially connected to the two worlds they bridge? And what is the cost of being marginal to multiple worlds (see Star, 1991), especially since these marginalities might be viewed with suspicion? These are the sort of questions, I would argue, that need further scrutiny.

Another layer to the question of the knowledge broker’s position is the question of visibility/invisibility—an issue that frequently features in the literature. Despite the emergence of spaces that specialize in the translation of knowledge between different worlds, knowledge brokering still tends to be unrecognized and unplanned (Johri, 2008; see also Wenger, 1998, p. 110). There is a lack of support and training for knowledge brokers (Surridge & Harris, 2007). It is said to be an activity that is usually not acknowledged nor recognized in institutions (Bielak et al., 2008), an activity that tends to be invisible and take place “back stage” (Vogel & Kaghan, 2001, p. 361). Therefore, knowledge brokers often try to make their roles and work visible and appear valuable to others. This might be especially difficult within the value system and the hierarchies of the academic world, a world that rewards and prioritizes disciplinary training, journal papers, research grants (Surridge & Harris, 2007, p. 309), and monopolistic organizational linkages (Joerges & Shinn, 2001, p. 8). As a case in point, here is an extract from an interview about science shops:

> Science Shops (...) will never be academic departments. How good is the department of Chemistry in "X" University at being a Science Shop? I suspect that it would be terrible. Science Shops have a particular purpose and particular role—acting as a broker between at least two worlds is a remarkably difficult thing to do and I think that if Science Shops are judged strictly by the rules of one world or the other they will always come up short. (Anonymous, 2004, p. 5)

It must be noted, though, that invisibility comes with its benefits: Some research technologists opt for (social) invisibility because this is "fully consistent with the tenets of the interstitial stance, and such a measure drastically reduces the risk of jealousy and enmity" and helps to avoid turf battles (Shinn & Joerges, 2002, p. 215).(4) Perhaps, this invisibility is inevitable: Because the role of knowledge brokers lies in moving and making things flow across boundaries, erecting boundaries (around their own practices) is not an option.

What is more, knowledge brokers produce, enable, and facilitate movement, and they themselves are in movement. They move back and forth between different social worlds. Not only are they transferring knowledge in one direction only, they are engaged in an exchange of knowledge through moving between places.(5) Hence, the word *transfer* does not do justice to the practices of knowledge brokers. De Laet (2002) prefers to use terms like *travel* and *transformation* instead of *transfer*. Like other forms of mediation, knowledge brokering is indeed collective and interactive (see Osborne, 2004, p. 443). In the case of knowledge brokering, this collective exploration is based on two key movements. On one hand, there is a translation of knowledge from one world to another. On the other hand, we see efforts to make knowledge socially, politically, and/or economically robust. So both the translation of knowledge and the translation of accountability/usability take place. The end result of these translations is the production of a new kind of knowledge—what we could call brokered knowledge. Brokered knowledge is knowledge made more robust, more accountable, more usable; knowledge that "serves locally" at a given time; knowledge that has been de- and reassembled.

All these points raise not only questions about the invisibility, interstitiality, and interactivity of knowledge brokers, but social scientists need to analyze more thoroughly their practices, the devices they create and use, and the benefits and drawbacks from their peripheral status.

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Notes

1. The term is also used in other arenas:

> In business, a broker is an agent, promoter, dealer, fixer, trader, someone who buys and sells; in politics, a broker is a diplomat, mediator, go-between, negotiator; in the information world, a broker is someone who knows how to access or acquire information and who provides a gateway to information resources; in education, a broker is a proactive facilitator who connects people, networks, organizations and resources and establishes the conditions to create something new or add value to something that already exists. (Jackson, 2003, p. 4)

2. Worthy of being mentioned here is the notion of "translational medicine." Analyzing translational research in biomedicine, Kraft (2009) notes that there are new institutional, professional, and disciplinary formations and that certain roles, such as that of the "clinician scientist," are reappearing.

3. Joerges and Shinn (2001, pp. 7-8) further write,

> These research-technologists admittedly work within universities, industry, state or independent establishments, yet at the same time they maintain some distance from their organization. In many instances, they pursue "hybrid careers." (...) Many research technologists develop a personality make-up suited to sustain many-sided professional relationships and "multi-lingual" cognitive worlds.

For an extended discussion see Shinn and Joerges (2002, pp. 213-216).

4. The issue is perhaps also for knowledge brokers to become *distinctive* without becoming *distinct* (see Shinn & Joerges, 2002, p. 214).

5. It is useful here to mention Osborne's (2004, p. 440) definition of a mediator as "the intellectual worker as enabler, fixer, catalyst and broker of ideas. Perhaps the salient feature (...) is the association of mediators with movement. The mediator is simply the one who *gets things moving* [italics in original]."

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